AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-207

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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* 2009 AMSAT Space Symposium and Annual General Meeting October 9-11 *
* Four Points Sheraton Hotel at the Baltimore Washington Airport *
* Details - http://www.amsat.org/amsat-new/symposium/2009/index.php *
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SB SAT @ AMSAT $ANS-207.01
Important Reminder AMSAT Board of Directors Ballots

AMSAT News Service Bulletin 207.01
>From AMSAT HQ SILVER SPRING, MD.
July 26, 2009
To All RADIO AMATEURS
BID: $ANS-207.01
To All AMSAT Members: As noted in last week's ANS, the original Board of Directors ballot that was mailed earlier this month to all AMSAT members and included with important AMSAT information has an error on it, stating "select no more than three" with five candidates listed. Replacement ballots of a different color have now been mailed to all AMSAT members in an an envelope marked "corrected ballot" and the new ballot states "Select no more than four" with five candidates listed as well as marked with "corrected ballot".

Please note that the none of the original ballots will be counted, so if you mailed the original ballot to AMSAT, you must also mail the corrected ballot in order to have your ballot be counted. The due date for submitting ballots has not changed and the corrected ballot must be received at the Silver Spring, MD no later than the close of business on September 15, 2009.

[ANS thanks AMSAT HQ for the above information]

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SB SAT @ AMSAT $ANS-207.02
AMSAT-UK Announces FUNcube Amateur Radio Satellite

AMSAT News Service Bulletin 207.02
>From AMSAT HQ SILVER SPRING, MD.
July 26, 2009
To All RADIO AMATEURS
BID: $ANS-207.02

AMSAT-UK has announced a new amateur satellite project - FUNcube. The project has received major initial funding from the Radio Communications Foundation (RCF) and is expected be developed in collaboration with ISIS-Innovative Solutions in Space BV.

FUNcube is an educational single cubesat project with the goal of enthusing and educating young people about radio, space, physics and electronics. It will support the educational Science, Technology, Engineering, Maths (STEM) initiatives and provide an additional resource for the GB4FUN Mobile Communications Centre.

The target audience consists of primary and secondary school pupils and FUNcube will feature a 145 MHz telemetry beacon that will provide a strong signal for the pupils to receive. It is planned to develop a simple receiver board that can be connected to the USB port of a laptop to display telemetry in an interesting way. The satellite will contain a materials science experiment, from which the school students can receive telemetry data which they can compare to the results they obtained from similar reference experiments in the classroom.

FUNcube is the first cubesat designed to benefit this group and is expected to be the first UK cubesat to reach space.

It is anticipated FUNcube will be launched into a Sun Synchronous Low Earth Orbit about 600-700km above the earth using one of the many launch opportunities that exist for Cubesat missions. In such an orbit the satellite passes over Europe approximately 3 times in the morning, and 3 in the evening, every day, perhaps allowing the morning passes to be used for educational purposes and the evening passes for Amateur Radio communications.

FUNcube will carry a UHF to VHF linear transponder that will have up to 1 watt and which can be used by Radio Amateurs worldwide for SSB and CW communications. Measuring just 10 * 10 * 10 cm, and with a mass of less than 1kg, it will be the smallest ever satellite to carry a linear transponder and the choice of frequencies will enable Radio Amateurs to use their existing VO-52 or DO-64 station.

A key feature of the satellite is the absence of an On-Board Computer. For reliability and maximum power efficiency, the design has been kept as straight-forward as possible with satellite control being achieved using simple commands. See the AMSAT-UK FUNcube webpage at:http://www.uk.amsat.org/content/view/696/68/

AMSAT-UK has more than 350 individual members and is one of more than 20 such groups worldwide. AMSAT-UK teams have provided hardware for more than 10 satellites over the past 35+ years including SSETI Express in 2005.They are presently involved with the development of hardware and software for a number of satellite projects including the European Student Earth Orbiter (ESEO), P3E, SUITSAT2, the Columbus module on the ISS and also the GENSO Ground station network.

The Radio Communications Foundation is a Registered Charity (Number 1100694) set up in 2003 to fund efforts to bring the wonders of radio

into the classrooms, universities and any other public place where hands on demonstration can influence understanding. The RCF funding for FUNcube is made possible through the generous bequest from a "silent key" who wanted the hobby that he loved brought to the attention of others.

AMSAT-UK: http://www.uk.amsat.org/
Radio Communications Foundation: http://www.commsfoundation.org/
GB4FUN: http://www.gb4fun.org.uk/
FUNcube contact: Graham Shirville G3VZV (g3vzv@amsat.org)

[ANS thanks AMSAT-UK for the above information]

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SB SAT @ AMSAT $ANS-207.03
SuitSat-2 Demo at the Central States VHF Society Conference

AMSAT News Service Bulletin 207.03
>From AMSAT HQ SILVER SPRING, MD.
July 26, 2009
To All RADIO AMATEURS
BID: $ANS-207.03

On July 24-25 the Central States VHF Society hosted their 43rd Conference in the Chicago area. The event attracted radio amateurs interested in experimentation with weak signal VHF/UHF, microwave, terrestrial and space communications, and EME.

SuitSat-2 System Engineer Gould WA4SXM was at the Conference with a functioning prototype of the SuitSat-2 hardware, antennas, and initial software. The success of the Phoenix ARISS system integration meeting held July 10-12 was evident as SuitSat-2 transmitted live signals everyone at the Conference could monitor on 145.950 MHz.

The SSTV subsystem was transmitting live pictures in Robot36 mode captured by the cameras. Reminder: if your computer SSTV capture software such as MMSSTV is functional viewing existing terrestrial SSTV transmissions you will be ready to receive SuitSat-2 video.

Gould also gave a presentation to a full house during which he discussed SuitSat-2 architecture and software. The presentation, as well as the live display, included these subsystems:

+ Software Defined Radio Transponder
+ Internal Housekeeping Processor Board
+ Power Control Board
+ Interconnect Board
+ Safety Power Interlock
+ Flexible antennas

The SuitSat-2 team plans to deliver the completed flight system to Russia in December, 2009 with an EVA deployment planned for the Spring of 2010. Watch the AMSAT Journal for full details as system integration completes and SuitSat-2 moves toward orbit!

[ANS thanks whomever for the above information]

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SB SAT @ AMSAT $ANS-207.04

Special Events Stations Commemorate Apollo 11 40th Anniversary

AMSAT News Service Bulletin 207.04
>From AMSAT HQ SILVER SPRING, MD.
July 26, 2009
To All RADIO AMATEURS
BID: $ANS-207.04

If you were fortunate to work the Amateur Radio special events stations that commemorated the 40th anniversay of the Apollo 11 landing on the moon here is a summary of the QSL information:

VE3MOON From the Canada Museum of Science and Technology
In celebration of the 40th anniversary of the first manned moon landing, the special event callsign VE3MOON will be operating from 14-27 July. The museum team plans to operate via AO-51, SO-50, VO-52, FO-29, and the ISS. QSL via Darin, VE3OIJ.

AO-51's 40th Anniversary Special Message
AMSAT-NA marked the 40th anniversary of the first manned lunar landing with a special event on AO-51. AO-51 transmited a special message commemorating the event on Monday, July 20. A special AO-51 SWL QSL is available to ground stations who copy the downlink. Send QSL requests marked "Apollo 11" with SASE to the AMSAT office at 850 Sligo Ave. Suite 600, Silver Spring, MD 20910.

Mark, K6HX posted recordings and SSTV images received during this event on his web page at http://tinyurl.com/kn9bgm. Ed, KL7UW has his recording at http://www.kl7uw.com/40th_apollo_message.wav.

Special Event Station K5E
The special call sign K5E was active on the satellites until July 24. If you worked K5E you can claim a special QSL card donated by WA3MVQ. QSL via Tim, N3TL with a standard size SASE.

EE Times prepared a July 20th special edition that tells the Lunar Landing story from the viewpoint of a number of engineers. It can be found on-line at: http://tinyurl.com/npklma. Page 44 features comments by AMSAT member Steve Bible, N7HPR.

[ANS thanks VE3MOON, AO-51 Operations Team, K5E, and Tom K3IO for the above information]

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SB SAT @ AMSAT $ANS-207.05
STS-127 To Deploy Dual Picosats on July 30

AMSAT News Service Bulletin 207.05
>From AMSAT HQ SILVER SPRING, MD.
July 26, 2009
To All RADIO AMATEURS
BID: $ANS-207.05

The University of Texas at Austin announced this week they will deploy a satellite in space on July 30, 2009 at 7:27 AM CDT via the STS-127 Space Shuttle Picosatellite Launcher (SSPL).

BEVO1 is a 12.5 cm cube and 3 kg in mass. The purpose of the mission is to collect data from NASA's DRAGON GPS receiver.

BEVO1 has two modes, data and beacon. The data mode is on over most parts of the United States, and the rest of the time,

the satellite is in beacon mode. Also, anyone tracking BEVO1
can record what they hear at http://paradigm.ae.utexas.edu/ops.
The University of Texas also has additional information at:
http://www.utexas.edu/news/2009/06/09/picosatellite/

BEVO1 Downlink Information:

Beacon Mode
Downlink Freq: 437.325 MHz
Modulation: FM, 200mW, Morse Code, ~20 WPM

Data Mode
Downlink Freq: 437.325 MHz
Modulation:
GMSK, 1W, 9600 baud, AX.25 (default)
FM, 1W, Bell 202, AX.25

NASA describes DRAGONSat as an anticipated eight-year program with
a launch of the satellites approximately every two years. The first
three missions will test individual components and subsystems while
the final mission will culminate with the successful docking of two
satellites. Refer to http://tinyurl.com/m2blyc for additional mission
information.

The University of Texas at Austin has developed BEVO1 and Texas A&M
University has developed AggieSat-2 for this mission. Both satellites
will perform the initial data acquition testing of the DRAGONSat pro-
gram.

[ANS thanks Jahshan Bhatti at the University of Texas at Austin and
 Andy, W5ACM for the above information]

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SB SAT @ AMSAT $ANS-207.06
SwissCube Delivery to India, Three Additional CubeSats Planned

AMSAT News Service Bulletin 207.06
>From AMSAT HQ SILVER SPRING, MD.
July 26, 2009
To All RADIO AMATEURS
BID: $ANS-207.06

The Southgate ARC webpage reports the SwissCube Amateur Radio
satellite, and its integration team will shortly be leaving for
the launch site in India. The SwissCube mission has a scientific
and a technology objective to observe and take measurements of
the airglow phenomena. The IARU has coordinated a downlink fre-
quency of 437.505 MHz.

The Technical University of Berlin will launch their BeeSat
cubesat project on this mission. The main objective of BeeSat
is the on orbit verification of newly developed micro wheels
for pico satellite applications. BeeSat will demonstrate the
use of coin size micro wheels for the attitude control. This
satellite is licensed to operate on 436.00 MHz.

University of Wuerzburg, Department of Computer Science will
launch UWE-2 is to test a newly developed attitude determination
system. Other experiments related to "IP in space" will be per-
formed. These experiments follow on from the experiments of the
previous satellite UWE-1. A AX25 and CW downlink on 437.385 MHz
has been coordinated by the IARU.

The Istanbul Technical University will launch ITUpSAT on a mission to characterize a passive attitude control system and take earth observation pictures. Main communications will take place on frequencies outside the amateur satellite service, but a 100mW 70cm CW telemtry beacon is planned to operated on 437.325 MHz.

Space launches are technically challenging and are usually prone to last minute changes, so the exact launch date for the PSLV is still not known.

[ANS thanks Trevor, M5AKA, Southgate, and IARU Coordination pages for the above information]

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SB SAT @ AMSAT $ANS-207.07
Satellite Shorts From All Over

AMSAT News Service Bulletin 207.07
>From AMSAT HQ SILVER SPRING, MD.
July 26, 2009
To All RADIO AMATEURS
BID: $ANS-207.07

+ Congratulations to Andrew Koenig, KE5GDB upon winning the Newsline Youth Ham of the Year Award! Amateur Radio on the International Space Station (ARISS) Team member Nick Lance, KC5KBO, who does ham radio mentoring of students at his local school, was pleased to learn that his student, Andrew Koenig, KE5GDB, has won the Newsline Youth Ham of the Year Award. ARISS was one of the main motivators for Andrew to study for his license, and to stay licensed. He continued his interest in space by helping with ARISS contacts and by being active in ham satellite operations. (Via Carol Jackson, KB3LKI, ARISS Weekly Report)

+ Full information for the 2009 Mid-Atlantic VHF Conference Saturday, September 26 in Plymouth Meeting, PA is available on-line at: http://tinyurl.com/mdrbxx (Packrats)

+ Replay of the Falcon-1 launch is available at: http://www.youtube.com/watch?v=Mfdk_VZMjQI

+ Here's a science oriented web page that may be of interest to the young visitors to your shack. Visit the NASA: Home and City site http://www.nasa.gov/externalflash/nasacity/index2.htm to see how space exploration impacts daily life.

+ John K8YSE says he will prepare special QSL cards from his Delaware satellite operation July 11-12. Watch for his announcement via the amsat-bb and his QRZ.com web page.

+ NASA has an interactive web site to allow you to explore the Apollo 11 landing site: http://www.nasa.gov/externalflash/apollo11_landing/index.html

+ An on-line HD video of the STS-127 launch is available at: http://tinyurl.com/lqeqqo (UniverseToday.com)

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office. And, with that please keep in mind that because cows eat grass they're lawn mooers.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM
K9JKM at amsat dot org